

expression of a polynucleotide obtainable through isolation from a *Carybdea rastonii* gene library by hybridization with a synthesized polynucleotide based on an amino acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, and SEQ ID NO: 5.

REMARKS

Responsive to the decision on Election/Restrictions, applicants thank the Examiner for rejoining the polypeptide sequences of SEQ ID NOs: 1, 2, 3, and 5.

The present application is a 371 of PCT/JP99/01607. As the National Stage of an International application, the present application does not claim priority of PCT/JP99/01607, it is merely entitled to the benefit of the filing date of March 30, 1999 as the National Stage version of that application. Accordingly, applicants have not amended the specification to include a priority claim.

Claims 17, 18, 32, and 36 were rejected under 35 U.S.C. §102(b) as anticipated by Allison et al. (Infect. Immun. (1997) p. 2765-2771). With regard to pending claims 17 and 22, this rejection is respectfully traversed. The present invention is directed to an isolated hemolytic protein having the amino acid sequence as SEQ ID NO: 5, or proteins produced by polynucleotides obtainable through isolation from *C. rastonii*, using hybridization techniques with polynucleotides having the sequence of SEQ ID NOs: 1, 2, 3, or 5.

Allison et al. disclose hemolytic proteins isolated or obtainable through isolation by *Pievotella melaninogenica*, the sequences disclosed therein are not equivalent to SEQ ID NOs: 1, 2, 3, or 5. Because Allison et al. fail to teach or

fairly disclose each of the claim limitations, the rejection under 35 U.S.C. §102(b) is improper and should be withdrawn.

Claims 17, 18, 32 and 36 were rejected under 35 U.S.C. §102(b) as anticipated by Sato (Ochanomizu Igaku Zasshi (1985) vol. 33, no. 2, pp. 131-151). With regard to pending claims 17 and 22, this rejection is respectfully traversed. As noted above, the present invention is directed to isolated hemolytic proteins according to SEQ ID NO: 5, as well as proteins produced by polynucleotides obtainable through isolation from *C. rastonii*, using hybridization with polynucleotides having the sequence according to SEQ ID NO: 1, 2, 3, or 5.

Sato discloses a hemolytic protein isolated from *C. rastonii*. Sato does not disclose or fairly suggest any sequences related to the proteins, specifically, there is no disclosure of SEQ ID NOs: 1, 2, 3, or 5. Accordingly, Sato can not be fairly read to anticipate the present invention as the reference fails to disclose claimed limitations. The rejection under 35 U.S.C. §102(b) is improper and should be withdrawn.

Claims 17, 18, 32, and 36 were rejected under 35 U.S.C. §102(b) as anticipated by Tamkun et al. (Biochim. Biophys. Acta (1981) 667: 87-98). With regard to pending claims 17 and 22, this rejection is respectfully traversed. As discussed above, the present invention is directed to an isolated hemolytic protein according SEQ ID NO: 5, and proteins produced by polynucleotides obtainable through isolation from *C. rastonii*, using hybridization with polynucleotides having a sequence according SEQ ID NOs: 1, 2, 3, or 5.

Tamkun et al. disclose hemolytic proteins isolated from *Physalia physalis*. Tamkun et al. fail to disclose or fairly suggest isolation of hemolytic proteins from *C. rastonii*, or sequences according to SEQ ID NOs: 1, 2, 3, or 5. Because Tamkun et al. fail to disclose or suggest the claimed limitations, the rejection under 35 U.S.C. §102(b) is improper and should be withdrawn.

Claims 17, 18, 22, 32, and 36 were rejected under 35 U.S.C. §112, first paragraph, for lack of enablement and for lack of possession of the claimed invention at the time of filing. With regard to pending claims 17 and 22, these rejections are respectfully traversed. Pending claim 17 is directed to isolated hemolytic proteins according to SEQ ID NO: 5. As noted on pages 12 and 15 of the pending Action, a claim directed to an isolated protein according to SEQ ID NO: 5 should overcome both rejections under 35 U.S.C. §112, first paragraph. Pending claim 22 is directed to proteins produced by a polynucleotide. That polynucleotide is obtainable by hybridizing a polynucleotide according to SEQ ID NOs: 1, 2, 3, or 5 with materials from a *C. rastonii* gene library. The invention is limited to the gene library of *C. rastonii*, and sequences according to SEQ ID NOs: 1, 2, 3, or 5. The claimed technique is enabled and supported by the disclosure, and was therefore clearly in the possession of the inventors at the time the application was filed. Because the pending claims are both enabled and were in possession of the inventors at the time of filing, the rejections under 35 U.S.C. §112, first paragraph should be withdrawn.

Reconsideration and favorable action on the pending claims is in order and is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #1830/49264).

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Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend claims 17 and 22 as follows:

17. (Amended) An isolated protein comprising the amino acid residue sequence of [SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 or] SEQ ID NO:5[, or any of the aforementioned sequences modified by an addition or deletion of one or more amino acid residues, and/or a substitution of one or more amino acid residues by another amino acid residue,] wherein said protein has hemolytic activity.

22. (Amended) [An isolated] A protein having hemolytic activity and containing at least one cystein residue in the molecule, wherein said protein is produced by expression of a polynucleotide obtainable through isolation from a *Carybdea rastonii* gene library by hybridization with a synthesized polynucleotide based on an amino acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, and SEQ ID NO: 5. [produced by expression of a polynucleotide sequence encoding the amino acid residue sequence of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 or SEQ ID NO:5 or a polynucleotide which hybridizes with said polynucleotide sequence.]